A B S T R A C T

The invention relates to a maskless lithography system for transferring a pattern onto the surface of a target, comprising at least one beam generator for generating a plurality of beamlets, modulation means comprising a plural-
5 ity of modulators for modulating the magnitude of a beam-let, and a control unit for controling each of the modula-tors, wherein the control unit generates and delivers pat-tern data to said modulation means for controlling the magnitude of each individual beamlet, the control unit
10 comprising at least one data storage for storing the pat-tern data, at least one readout unit for reading out the data from the data storage, at least one data converter for converting the data that is read out from the data storage into at least one modulated light beam, and at
15 least one optical transmitter for transmitting said at least one modulated light beam to said modulation means.